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| BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980 | | | WANG, QUAN ZHEN | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/828,570 | Applicant(s) TYAN ET AL. | |
| | Examiner QUAN-ZHEN WANG | Art Unit 2613 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-15,17-23,25-31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-15,17-23,25-31 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 11/26/2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7, 9-15, 17-23, 25-31, and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 9, 17, 25, and 33 recite the limitation of "computing a hybrid path route ... between a first node and a second node". However, the disclosure does not describe how to "compute" the "hybrid path route" in such a way as to enable one skilled in the art to make and use the invention.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble of claims 17-24 recites “logic for managing network traffic, the logic encoded in computer readable media and operable when executed”. It appears the logic as recited are executable instructions, therefore, they are software. Software or program per se is non-statutory subject matter. See MPEP §2106.01.

Even though the amended claim 17 includes the phrase of “computer readable media”, the claimed subject matter is still “logic for managing network traffic”, which is non-statutory subject matter. See MPEP §2106.01. In accordance with MPEP, " When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" (MPEP §2106.01). It is clear that only when the “functional descriptive material” “becomes structurally and functionally interrelated to the medium”, then it becomes statutory. For the instant case, what claimed in claim 17 is “logic for managing network traffic”. The claimed logic is not “structurally and functionally interrelated to the medium”, therefore, the claimed subject matter is non-statutory subject matter according to MPEP.

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 4-7, 9-10, 12-15, 17-18, 20-23, 25-26, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (U.S. Patent Application Publication US 2003/0117678 A1).

Regarding claims 1, 9, 17, and 25, Chang discloses a system (figs. 1-5, 36A-36B) for managing network traffic, comprising: an internet protocol network (fig. 1, network 110; fig. 36A: network formed by the IP routers) for communicating traffic, the IP network comprising a plurality of nodes coupled by IP links (fig. 1, node 111 and 112; fig. 36A, the link between the IP nodes (routers)); a wavelength division multiplex (WDM) topology coupled to the IP network (fig. 1, network 120), the WDM topology comprising a plurality of lightpaths (fig. 1, the paths connecting node 1-node5) operable to communicate optical traffic; and a controller (figs. 2-3, NC&M) operable to: provision the IP network for communicating traffic; monitor the IP network for a congestion event; upon detecting a congestion event, select a label switched path (LSP) of the IP network for reroute (paragraph 0113); compute a hybrid path route for the selected LSP between a first node and a second node of the plurality of nodes, the hybrid path route comprising at least one IP link (fig. 36A, the IP link between the IP nodes (routers) and

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at least one lightpath of the WDM topology (fig. 36A, the WDM links with in 3625); determine whether performance of the hybrid path route for the selected LSP reduces costs (for example, paragraph 0105); and if the hybrid path route reduces costs: activate a new IP link on each of the at least one lightpaths of the plurality of lightpaths of the WDM topology; and reroute the selected LSP according to the hybrid path route (for example, paragraphs 0101-0109).

Regarding claims 2, 10, 18, and 26, Chang further discloses that the controller is further operable to decommission an idle IP link after rerouting the selected LSP (for example, paragraph 0113).

Regarding claims 4, 12, 20, and 28, Chang further discloses that the controller operable to account for a cost associated with each IP link and each lightpath of the hybrid path route (for example, paragraph 0105).

Regarding claims 5, 13, 21, and 29, Chang further discloses that a controller operable to activate a new IP link on each of the at least one lightpaths of the plurality of lightpaths of the WDM topology comprises a controller operable to: allocate an unused router port on each end of each of the at least one lightpaths; and activate the allocated router ports with respective established lightpaths (for example, paragraphs 0105 and 0113).

Regarding claims 6, 14, 22, and 30, Chang further discloses that the IP network comprises an IP router (fig. 1, IP router 111).

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Regarding claims 7, 15, 23, and 31, Chang further discloses that the WDM topology couples optical cross-connection of the WDM topology (fig. 1, optical network 120).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 11, 19, 27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. Patent Application Publication US 2003/0117678 A1) in view of Pieda et al. (U.S. Patent US 6,882,627 B2).

Regarding claims 3, 11, 19, 27, and 33, Chang has been discussed above in regard with claims 1-2, 4-7, 9-10, 12-15, 17-18, 20-23, 25-26, and 28-31. Chang's network inherently comprises a subset of available lightpaths. Chang differs from the claimed invention in that Chang does not specifically disclose using a transformed topology to calculate the hybrid path. However, using a transformed topology to calculate a path in a communication network is well known in the art. For example, Pieda discloses to calculate a path using a transformed topology (fig. 3C). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the method of Pieda in the system of Chang to calculate a path using a transformed topology. One of ordinary skill in the art would

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have been motivated to do so in order to identify the best non-primary path through the network.

Response to Arguments

10. Applicant's arguments on claim 33 filed on 10/2/2008 is moot in view of the new ground of rejection.

11. Applicant's arguments on other claim filed on 10/2/2008 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant argues on page 15 of the instant Brief, "Claim 1 recites computing a hybrid path route for a selected label switched path (LSP) between a first node and a second node of the plurality of nodes, the hybrid path route comprising at least one IP link and at least one lightpath of a wavelength division multiplex (WDM) topology coupled to the IP network. This is not anticipated by Chang." However, the claim does not differentiate itself from the prior art reference. Chang clearly and specifically illustrated the figures that the nodes are IP nodes (IP routers) and therefore the links between the IP nodes are IP links (see for example, figs. 1 and 36A). Chang explicitly teaches Chang also explicitly discloses that a path route comprising "at least one lightpath of a WDM topology coupled to the IP network (figs. 1, 31, 33, and 36A). In addition, as it is clearly and explicitly illustrated in the drawings (for example, figs. 36A and 36B), Chang's network comprises a route comprising at least one IP link and at least one lightpath of a wavelength division multiplex (WDM) topology

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coupled to the IP network. Therefore, the route between the nodes in Chang's network clearly and undoubtedly reads the claimed "hybrid path route". Consequently, the route computing of Chang reads the claimed "computing a hybrid path route".

Regarding claim 4, Applicant argues that, "Chang does not disclose determining whether performance of the hybrid path route for the selected LSP reduces costs for a cost associated with each IP link and each lightpath of the hybrid route". Examiner respectfully disagrees with Applicant. In accordance with MPEP, "The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness." In re Napier, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983)" See MPEP §2112. For the instant case, Chang explicitly discloses that "each destination is associated with a preferred path which would minimize the cost", and the cost "is computed based on the total propagation distance, the number of hops, and the traffic load" (paragraph 0105). It is clear that the reduction of the costs in Chang read the claimed limitation of reducing costs comprises "accounting for a cost associated with each IP link and each lightpath of the hybrid path route". Furthermore, because Chang discloses hybrid paths in the network, the reduction of the costs of Chang reads on the claimed limitation of "determining whether performance of the hybrid path route for the selected LSP reduces costs comprises accounting for a cost associated with each IP

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link and each lightpath of the hybrid path route". Therefore, the rejection of claim 4 still stands. For analogous reasons, the rejection of claims 12, 20, and 28 still stand.

Applicant further argues, "Chang, at least, only discloses routing within an optical network". However, the IP link is associated with the hybrid path route, therefore, even Chang only "discloses routing within an optical network", Chang still reads the claim with its broadest reasonable interpretation.

Regarding claim 3, Chang's network inherently comprises a subset of available lightpaths.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Liu (U.S. Patent Application Publication US 2003/0179716 A1) discloses a virtual IP network over reconfigurable WDM network. Kano et al. (U.S. Patent Application Publication US 2003/0043745 A1) disclose a path modifying, label switching node and administrative node in label transfer network.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/16/2009

/Quan-Zhen Wang/

Primary Examiner, Art Unit 2613